

REMARKS

By this Amendment, the specification was amended to correct several typographical errors and to correct the reference to "flexible webs" identified in the Office Action, item 2. Claims 1 and 10 were amended. Claims 1 and 10 were amended to recite that "the troughs are in contiguous relationship with the inner ducts." Support for this amendment is found in the specification at page 12, line 20. Favorable reconsideration is respectfully requested.

Oath/Declaration. A new declaration executed by the inventor is enclosed as requested in item 1 of the Office Action.

Specification. The specification has been amended to correct the objection set forth in item 2 of the Office Action.

Claim Rejections - 35 USC § 103. The Office Action rejected claims 1-4, 6-12, and 16-20 as being unpatentable over Fochler (U.S. Patent No. 4,741,593) in view of Bondon (U.S. Patent No. 4,705,914). According to the Office Action, it would have been obvious to provide Fochler's outer duct 20 with corrugated ridges and troughs "as taught by Bondon." Applicant respectfully traverses this rejection and submits that the rejected claims would not have been obvious at the time the invention was made to a person having ordinary skill in the art.

Fochler relates to a multiple channel duct assembly for cables and is relevant to the present invention. It was discussed in the background section at page 2, line 3 through page 3, line 23. In contrast, the **Bondon** patent has nothing to do with a multiple channel duct assembly. It discloses a high voltage cable for pressurized gas insulated transmission line service. It discloses tubular elements (13) of electrically insulating material designed to be filled with an electronegative gas under pressure, such as SF₆. Bondon, column 5, lines 24-27. **Bondon's** tubular elements (13) do not constitute a multiple channel duct assembly. In addition, Bondon's corrugated sheath 11 is a gas-tight, *metallic conductive* sheath. Bondon, column 4, lines 31-33. Importantly, Bondon's insulating tubular elements (13) are expressly designed to separate or space the high voltage conductor member (12) from the conductive sheath (11). Bondon, column 4, lines 35-40.

Neither Bondon nor Fochler teaches, suggests, or motivates one having ordinary skill in the art to replace Fochler's "thin flexible film or sheath 20" with the corrugated

conductive sheath of Bondon. The Office Action states that this modification of Fochler would have been obvious “to provide a strong, safe, lightweight sheath as well as desirable strength and bending characteristics, and to provide flexibility to facilitate changes of direction of said outer duct during installation.” Applicant submits that the prior art lacks any such motivation because Fochler’s “thin flexible film or sheath 20” already provides the characteristics listed in the Office Action (see Fochler, column 3, lines 34-43). Therefore, one skilled in the art would not be motivated to replace Fochler’s sheath with some other material, especially Bondon’s metallic conductive sheath.

Likewise Bondon lacks any teaching, suggestion, or motivation to apply its metallic conductive sheath to Fochler’s multiple channel duct assembly. First, the pending claims recite a “*plastic outer duct*.” Bondon’s metallic conductive sheath is plainly contrary to the pending claims. Next, it is extremely doubtful that Bondon’s metallic conductive sheath applied to Fochler’s multiple channel duct assembly would be lightweight, flexible, or low cost. Therefore, one of ordinary skill in the art would not be motivated to replace Fochler’s “thin flexible film” with Bondon’s heavy, inflexible, and expensive sheath.

In view of the foregoing, Applicant submits that claims 1-4, 6-12, and 16-20 would not have been obvious under Section 103(a) based upon the combined teachings of Fochler and Bondon. Withdrawal of the rejection is respectfully requested.

Claims 5 and 13. The Office Action rejected claims 5 and 13 as being unpatentable over Fochler in view of Bondon and further in view of Vogelsang (U.S. Patent No. 5,236,016). The Vogelsang patent was cited for the purpose of disclosing inner ducts connected by flexible connecting webs. While Vogelsang discloses flexible connecting webs, it fails to disclose the limitations and features of independent claims 1 and 10 that are lacking in Fochler and Bondon, discussed above. Since the cited prior art, in combination, fails to disclose and suggest each and every limitation set forth in claims 5 and 13, Applicant submits that claims 5 and 13 would not have been obvious under Section 103(a) based upon the combined teachings of Fochler, Bondon, and Vogelsang. Withdrawal of the rejection is respectfully requested.

Claims 14-15. The Office Action rejected claims 14-15 as being unpatentable over Fochler in view of Bondon and further in view of Battle (U.S. Patent No. 5,463, 187). The

Battle patent was cited for the purpose of disclosing longitudinal and spiral ridges on the interior surfaces of the inner ducts. While Battle discloses longitudinal and spiral ridges, it fails to disclose and suggest the limitations and features of independent claims 1 and 10 that are lacking in Fochler and Bondon, discussed above. The Battle patent was discussed in detail in Applicant's Amendment and Response to Office Action dated December 3, 2002, (hereinafter "Prior Response"), which is incorporated by reference.

Battle discloses a multi-duct conduit assembly having a plastic, corrugated outer duct. However, as discussed in Applicant's Prior Response, Battle's outer duct is incompatible with the present invention. The present invention is directed to a multiple channel duct assembly for cables that is sufficiently flexible that it can be coiled around transportable reels, such as reels having a diameter of about two meters. Specification, page 14, lines 20-21. The multiple channel duct assembly is fabricated in very long lengths, even longer than one kilometer. Specification, page 14, lines 23-24.

In contrast, the Battle patent discloses an assembling-type multiple channel duct system. Assembling-type duct systems are distinctly different than coiling-type duct systems of the present invention. The duct system of Battle must be manually assembled at the job site, using 20 foot length sections that may be joined end-to-end with specially configured couplings. See, Battle, column 2, line 67; column 3, lines 1, 19-23. While Battle's multiple channel duct system may be bent, it cannot be bent sufficiently to coil around a transportable reel. The minimum arc radius is 10 feet corresponding to a minimum circle diameter of 20 feet, which much larger than conventional reels. Battle, column 5, lines 53-54; column 8, line 26.

The claims recite that the corrugated outer duct encircles the "inner ducts over their entire length to retain them in their contiguous relationship" and "the troughs are in contiguous relationship with the inner ducts." Figures 2, 6, 7, 8, 9, 10, and 11 show the outer duct encircling the inner ducts to retain them in their contiguous relationship and the troughs in contiguous relationship with the inner ducts.

In contrast, the Battle patent discloses a multiple channel duct system in which the inner ducts are spaced apart from each other and from the outer duct. As shown clearly in Figures 1 and 3 of Battle, the inner ducts are not in contiguous, abutting contact and the

troughs of the outer duct are not in contiguous relationship with the inner ducts. In addition, the Battle's outer duct does not retain the inner ducts "in their contiguous relationship." Battle uses special coupling structures to keep the inner ducts spaced apart from each other and from the outer duct. In addition, Battle teaches that the ends of the inner ducts (19) extend within coupler 21 and are stopped by annular stop (41), as shown in Figure 3. Battle, column 6, lines 24-26. Thus, the annular stop (41) stops the ends of the inner ducts from touching.

In view of the foregoing, Applicant submits that the Battle patent fails to disclose the limitations and features of independent claim 10 that are lacking in Fochler and Bondon, discussed above. Since the cited prior art, in combination, fails to disclose and suggest each and every limitation set forth in claims 14-15, Applicant submits that claims 14-15 would not have been obvious under Section 103(a) based upon the combined teachings of Fochler, Bondon, and Vogelsang. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, Applicant submits that claims 1-20 are in condition for allowance. If there are any remaining issues preventing allowance of the pending claims, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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Date: May 1, 2003

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